

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY									
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____									
Misidentified ☐	Past Due ☐										

Work Order ID 133510

Monday, June 08, 2015 3:46:46 PM

133510

Page 2

Item ID: D2938-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Saddle LH Out, 206

Stop

NS2

Start Date: 6/08/15

Start Qty: 4.00

4

Cust Item ID:

Required Date: 6/08/15

Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

4

0

DAB
20
9-89

15-08-11

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

(4) 15-8-12

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Memo

0.00

Powder Coating

START TIME:

11:13

OVEN TEMPERATURE:

11:43

FINISH TIME:

320°

4 < 13/08/15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 133510

Monday, June 08, 2015 3:46:46 PM

133510

Page 3

Item ID: D2938-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle LH Out, 206
 Start Date: 6/08/15 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 6/08/15 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160	QC3- Inspect Part Finish	0.00							DAS 38 9-89
-----	--------------------------	------	--	--	--	--	--	--	-------------------

160

QC

Memo

Quality Control

AUG 13 2015

170	Identify as per dwg & Stock Location: <u>ST395</u>	0.00							DAS 26 9-89
-----	--	------	--	--	--	--	--	--	-------------------

170

Packaging

Memo

Packaging

④

JA

AUG 14 2015

180	QC21- Final Inspection - Work Order Release	0.00							
-----	---	------	--	--	--	--	--	--	--

180

QC

Memo

Quality Control

ML5

AUG 14 2015

ME
15-8-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Picklist Print

Monday, June 08, 2015 3:46:46 PM

Page 1

Work Order ID: 133510

133510

Parent Item: D2938-1

D2938-1

Parent Item Name: Saddle LH Out, 206

Start Date: 6/08/15

Required Date: 6/08/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: B 00.06.26 New DWG rev (mpp 2069)EC
IPP Rev:C As per Rev C 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003		Manufactured	No			100	Each	0.0000	1	4			
D6101-003									**			DAS	
Saddle Billet, 7075												37	
												9.89	5.07.02

B 132646

4/

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

DART AEROSPACE LTD		Work Order: 133510
Description: 206 Saddle, Outboard, Left side		Part Number: D2938-1
Inspection Dwg: D2938 Rev. C		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2938 Rev. C and record below:

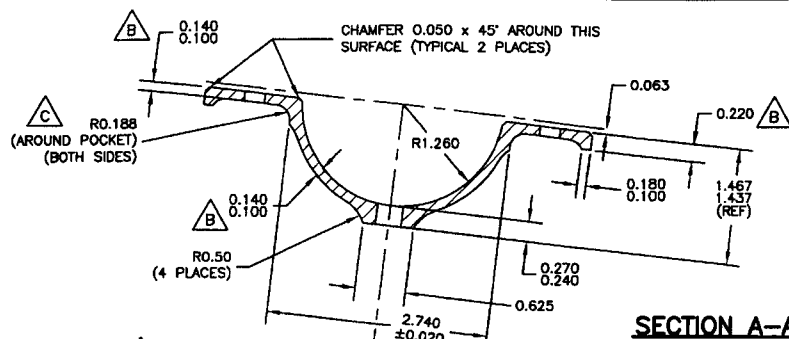
				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.100	0.140		.124	.123	.123	.122		
B	0.100	0.140		.122	.122	.124	.123		
C	0.100	0.140		.112	.113	.114	.115		
D	0.210	0.230		.218	.219	.220	.221		
E	1.245	1.255		1.250	1.250	1.250	1.250		
F	1.245	1.255		1.250	1.250	1.250	1.250		
G	2.495	2.505		2.500	2.500	2.500	2.500		
H	0.510	0.515		.511	.511	.511	.511		
I	1.572	1.582		1.577	1.577	1.577	1.577		
J	2.495	2.505		2.500	2.500	2.500	2.500		
K	0.257	0.262		.257	.257	.257	.257		
L	0.312	0.317		.314	.314	.314	.314		
M	0.235	0.240		.239	.239	.239	.239		
N	0.100	0.140		.123	.124	.125	.124		
O	0.540	0.560		.548	.544	.548	.549		
P	0.490	0.510		.498	.498	.498	.498		
Q	3.715	3.725		3.720	3.720	3.720	3.720		
R	2.720	2.760		2.745	2.746	2.745	2.745		
S	0.240	0.270		.250	.250	.249	.249		
T	0.100	0.180		.180	.180	.180	.180		
U	1.625	1.635		1.630	1.630	1.630	1.630		
V	1.362	1.372		1.367	1.367	1.367	1.367		
W	0.316	0.321		.318	.318	.318	.318		
X	1.250	1.270	MEASURED	1.262	1.263	1.262	1.263		
Y	1.565	1.585	on HARS 2	1.577	1.576	1.577	1.577		
Z	0.178	0.198		.188	.188	.188	.188		
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									

Accept/Reject

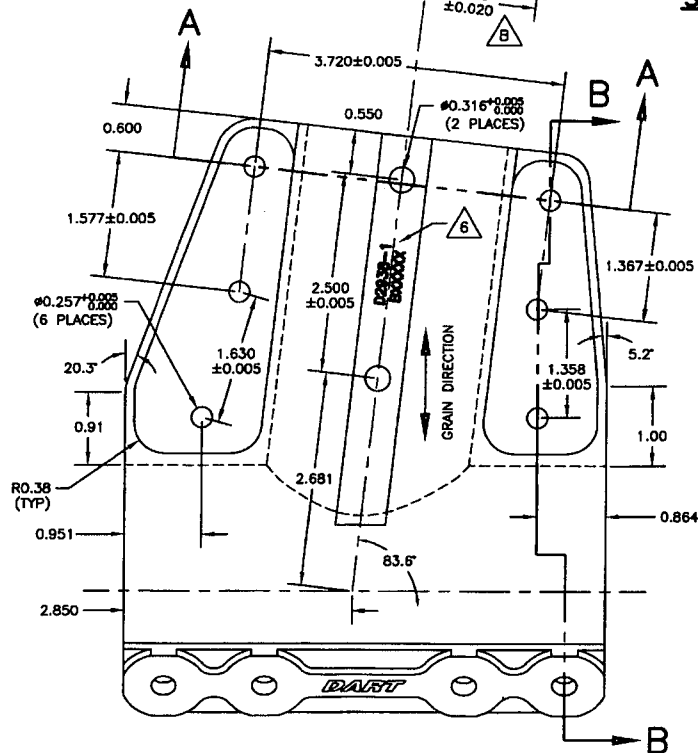
Measured by:	37	DAS
Date:	15.07.03	40

Audited by:	20	DAS
Date:	15-08-11	9-89

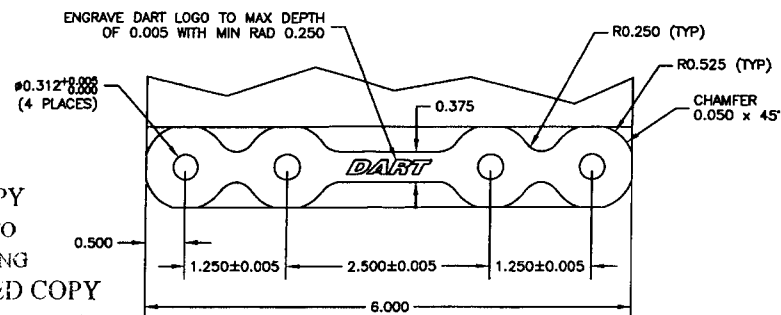
Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Reformat; Added Dim. X-Y, DT8683, DT8686, DT8690	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM	



SECTION A-A

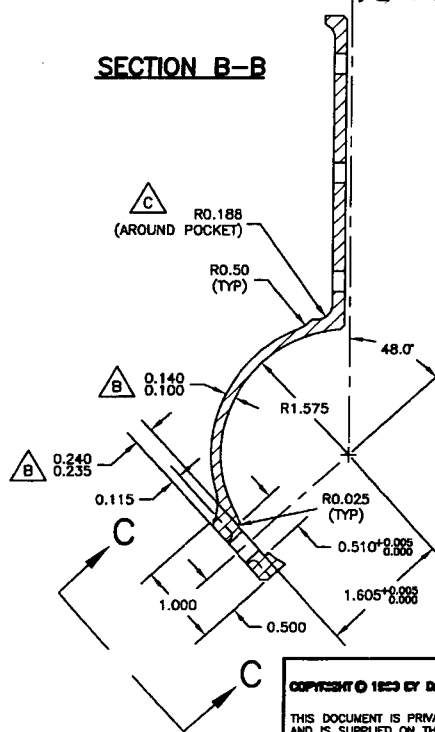


SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 133510 MLJ
15-06-10



VIEW C-C

SECTION B-B



D2938-1 LH SADDLE (SHOWN)
D2938-2 RH SADDLE (OPPOSITE)

NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-003 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.11.12	NEW ISSUE
DESIGN	4	DRAWN BY CB
CHECKED	PH	APPROVED
DATE	06.11.09	TITLE SADDLE OUTSIDE
DART AEROSPACE USA, INC.		REV. C SHEET 1 OF 1 SCALE 2:3

COPYRIGHT © 1993 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL
AND IS SUPPLIED ON THE EXPRESS CONDITION
THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE USA, INC.

07.02.12



Part Number: D2938-1	Rev: C	- Page 1 -
Description: SADDLE OUTSIDE	Inspection Dwg: D2938	Work Order: 133510

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
1	1.260	+0.010/-0.010	1.250	1.250	1.250	1.250	
2	0.063	+0.010/-0.010	0.053	0.053	0.054	0.055	
3	0.220	+0.010/-0.010	0.221	0.220	0.219	0.220	
4	1.452	+0.015/-0.015	1.448	1.447	1.447	1.446	
5	0.120	+0.020/-0.020	0.121	0.122	0.120	0.119	
6	0.312	+0.005/0.000	0.312	0.313	0.313	0.313	
7	0.500	+0.010/-0.010	0.504	0.502	0.500	0.499	
8	1.250	+0.005/-0.005	1.249	1.249	1.249	1.250	
9	2.500	+0.005/-0.005	2.500	2.500	2.500	2.499	
10	1.250	+0.005/-0.005	1.250	1.250	1.250	1.250	
11	6.000	+0.010/-0.010	6.003	6.003	6.003	6.003	
12	0.063	+0.010/-0.010	0.058	0.059	0.062	0.064	
Ang13	48.000	+0.500/-0.500	47.510	47.520	47.500	47.510	
14	1.575	+0.010/-0.010	1.571	1.572	1.571	1.572	
15	1.605	+0.005/0.000	1.605	1.605	1.605	1.605	
16	0.500	+0.010/-0.010	0.506	0.506	0.505	0.505	
17	0.500	+0.010/-0.010	0.507	0.507	0.507	0.507	
18	0.115	+0.010/-0.010	0.114	0.118	0.118	0.117	
19	0.235	+0.005/0.000	0.239	0.239	0.240	0.239	
20	0.864	+0.010/-0.010	0.868	0.869	0.867	0.870	
21	5.200	+0.500/-0.500	5.205	5.204	5.196	5.198	
22	1.359	+0.005/-0.005	1.360	1.360	1.358	1.357	
23	1.367	+0.005/-0.005	1.367	1.367	1.368	1.367	
24	0.316	+0.005/0.000	0.316	0.316	0.316	0.316	
25	0.550	+0.010/-0.010	0.549	0.550	0.550	0.551	
26	3.720	+0.005/-0.005	3.718	3.719	3.717	3.718	
27	0.600	+0.010/-0.010	0.597	0.596	0.595	0.598	
28	1.577	+0.005/-0.005	1.576	1.580	1.577	1.576	
29	2.500	+0.005/-0.005	2.499	2.499	2.498	2.499	
30	0.257	+0.005/0.000	0.257	0.258	0.258	0.257	
31	1.630	+0.005/-0.005	1.631	1.630	1.632	1.631	

Measured by:
Mathieu Lamarche

Date:
2015-8-11

Audited by:

Date:



Part Number: D2938-1	Rev: C	- Page 2 -
Description: SADDLE OUTSIDE	Inspection Dwg: D2938	Work Order: 133510

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
32	20.300	+0.500/-0.500	20.229	20.254	20.239	20.259	
33	0.951	+0.010/-0.010	0.950	0.951	0.954	0.949	
34	2.850	+0.010/-0.010	2.852	2.853	2.853	2.853	
35	2.681	+0.010/-0.010	2.684	2.682	2.683	2.680	
36	83.600	+0.500/-0.500	83.552	83.557	83.553	83.564	
D37	0.375	+0.010/-0.010	0.377	0.377	0.377	0.378	
D38	0.050	+0.010/-0.010	0.040	0.040	0.040	0.040	
D39	0.188	+0.010/-0.010	0.188	0.188	0.188	0.188	
D40	0.120	+0.020/-0.020	0.108	0.110	0.108	0.110	
D41	0.510	+0.005/0.000	0.512	0.511	0.512	0.512	
D42	0.050	+0.010/-0.010	0.040	0.040	0.040	0.040	
D43	0.120	+0.020/-0.020	0.125	0.124	0.127	0.126	
D44	0.140	+0.040/-0.040	0.140	0.140	0.140	0.140	
D45	0.255	+0.015/-0.015	0.247	0.248	0.249	0.249	
D46	0.625	+0.010/-0.010	0.635	0.635	0.635	0.635	
D47	2.740	+0.020/-0.020	2.743	2.743	2.741	2.741	
D48	0.120	+0.020/-0.020	0.127	0.127	0.128	0.128	

Measured by:
Mathieu Lamarche

Date:
2015-8-11

Audited by:

Date: